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10/816,031	03/31/2004	Louis A. Lippincott	ITL.1713US (P18841)	9305

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TROP, PRUNER & HU, P.C.
1616 S. VOSS ROAD, SUITE 750
HOUSTON, TX 77057-2631

EXAMINER	
MARANDI, JAMES R	

ART UNIT	PAPER NUMBER
2421	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/816,031	LIPPINCOTT, LOUIS A.	
	Examiner	Art Unit	
	JAMES R. MARANDI	2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 July 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7,8 and 24-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7,8 and 24-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is in response to applicant's amendment filed on 7/27/2009. Claims 1-5, 7, 8, and 24-27 are presently pending. Claims 6, and 9 – 23 have been cancelled.

Response to Arguments

2. Applicant's arguments with respect to claims 1 and 24 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paul Moroney, USPN 6,532,593 (herein after "Moroney"), in view of Y. Nakajima et al., "Rate Conversion of MPEG Coded Video by Re-Quantization Process", IEEE Proceedings of International Conference on Image Processing, 1995, PP 408-411 (hereinafter "Nakajima").

5. Regarding claim 1, Moroney discloses **a system, comprising:**

a decoder to decode encoded video information having a first format (Fig. 2, 210) **into intermediate video information and to extract motion vectors from the encoded video information** (Motion Vectors-MV- are extracted at 115 and send to 135 and 194), see Col. 4 line 6- Col. 5, line 23.**;**

a compression block (250) **to encode the digital data into output video information having a second format using the motion vectors extracted from the encoded video information** (Motion Vectors –MV- are supplied and used in 194 of compression block 250)**;**

a rate control unit to adjust a bit rate of an output from said compression block (Fig. 2, quantizer 175, quantization level Q2 is controllable by the user and changes the output rate; Col. 4, lines 45- 49); **and**

a device to store the output video information from the compression block (Fig. 4, 470; Col. 6, line 50 through Col. 7, line 33).

Moroney discloses that the quantization level Q2 is controllable by the user. However, he is not explicit on **using quantization data from said decoder** (does not show that Q2 is derived from Q1).

However, Nakajima discloses rate conversion of MPEG coded video by re-quantization process, where as shown in Fig. 2, a bit stream 1 with rate R1 is changed to a bit stream 2 with rate R2 (see section 2.1, page 408). Furthermore, he shows that the Qnt (Encoder) derives quantization Q2 from quantization Q1 supplied by IQnt (Decoder) as shown in Section 2.3 (page 409), and Equation 12 (page 410).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Moroney with Nakajima's teaching in order to provide for adaptive re-quantization and rate control based on the parameters of the original picture.

5.1. Regarding claim 2, the system of Moroney and Nakajima discloses **wherein the first format and the second format have a common format** (see Moroney Col 5, lines 13- 24).

5.2. Regarding claim 5, the system of Moroney and Nakajima discloses **wherein the decoder is arranged to extract quantization data, picture data, or error data from the encoded video information** (See Moroney: Col. 3, lines 58-62, Fig. 2, Col. 5, lines 13- 18) .

5.3. Regarding claim 7, the system of Moroney and Nakajima discloses **wherein the intermediate video information includes digital pixel information** (Moroney discloses in Fig. 2 that the digital pixel information is provided to adder 130 and upon further processing output to 160 (Col. 4, lines 15- 44)).

6. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moroney in view of Nakajima, further in view of A.C.W. Lai et al., USPGPUB 2002/0190876 (hereinafter "Lai")

6.1. Regarding claim 3, the system of Moroney and Nakajima discloses **wherein the common format includes MPEG-1, MPEG-2**. Moroney discloses transcoding from one format to another and provides examples such as HD TV to SD TV, or MPEG-1 to MPEG-2 (Col. 3, lines 26-35).

The system of Moroney and Nakajima does not disclose wherein the common format includes **MPEG-4, H.264, Windows Media Video version 9 (WMV9) or Advanced Video System (AVS)**.

However, Lai, in analogous art, discloses transcoding and conversion of **MPEG-4** and **Windows Media**, and H.263 (**¶¶** [8] and [63], and tables 2-5).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Moroney and Nakajima with Lai's invention in order to transcode a wide variety of formats in support of various user systems/ applications to meet user needs.

As to **version 9 of Windows Media**, **H.264**, and **Advanced Media System**, official notice is taken that it would have been obvious to an artisan at the time of invention to add multitude of additional formats to the conversion capabilities of the system of Moroney, Nakajima and Lai in order to further support user needs.

6.2. Claim 4 is rejected by the same analysis as claim 3.

7. Claims 8, and 24- 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moroney in view of Nakajima, further in view of Nicola John Fedele, USPN 5,920,354 (hereinafter "Fedele").

7.1. Regarding claim 8, the system of Moroney and Nakajima does not explicitly dislcose **including: an output port to output the intermediate video information**.

However, Fedele discloses the intermediate analog signal (between 120 and 150 in Fig. 1) to be of YIQ format, providing ports/ tap points to feed video information to other devices. (Col. 2, line 65 through Col. 3, line 23)

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Moroney and Nakajima with Fedele's invention in order to provide an intermediate display for monitoring of intermediate signal information.

7.2. Regarding claim 24, Moroney discloses **a method, comprising**:

obtaining at least motion vectors from an encoded video stream (Fig. 2, decoder section 210, MVs are extracted at 115)**;**

decoding the encoded video stream to generate an intermediate video stream (the stream moving between decoder 110, element 130, and encoder 150, element 160)

encoding the intermediate video stream **to generate an output video stream using the motion vectors obtained from the encoded video stream** (Motion Vectors –MV- are supplied and used in 194 of compression block 250); **and**

adjusting a bit rate of the compressed digital stream (Fig. 2, quantizer 175, quantization level Q2 is controllable by the user and changes the output rate; Col. 4, lines 45- 49).

Moroney discloses that the quantization level Q2 is controllable by the user. However, he is not explicit on **using quantization data** obtained through the intermediate stream (does not show that Q2 is derived from Q1).

However, Nakajima discloses rate conversion of MPEG coded video by re-quantization process, where as shown in Fig. 2, a bit stream 1 with rate R1 is changed to a bit stream 2 with rate R2 (see section 2.1, page 408). Furthermore, he shows that the Qnt (Encoder) derives quantization Q2 from quantization Q1 supplied by IQnt (Decoder) as shown in Section 2.3 (page 409), and Equation 12 (page 410).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Moroney with Nakajima's teaching in order to provide for adaptive re-quantization and rate control based on the parameters of the original picture.

The system of Moroney and Nakajima fail to disclose that the intermediate video stream is an **analog video stream**.

However, Fedele, in analogous art, discloses: decoding the encoded video stream to generate an **analog video stream** (Fig. 1, the digital data form 110 is converted by 120 to analog YIQ; Col. 3, lines 10- 15)**;** and encoding the analog video stream to digital output stream (150, Digital NTSC Interface, Col.3, lines 15- 23)**;**

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Moroney and Nakajima with Fedele's invention in order to have an analog intermediary signal to be supplied to analog receivers and offer transcoding possibilities for a variety of video formats.

7.2.1. Regarding claim 25, the system of Moroney and Nakajima discloses **wherein the obtaining further includes obtaining quantization data and picture data from the encoded video stream**. Moroney discloses that

picture data, including quantization, is obtained at 115 (Fig. 2); also see Col. 4 line 6- Col. 5, line 23 . Furthermore, Nakajima discloses obtaining/ calculating encoder quantization levels based on decoder's quantization data as shown in Equation 12 (page 410), and Section 2.3 (page 409).

7.2.1.1. Regarding claim 26, the system of Moroney and Nakajima discloses **controlling a rate of the encoding using the quantization data and the picture data** Moroney discloses picture information from 115 is supplied to encoder/compressor section 250 at 194 via link 220. Also see Col. 4 line 6- Col. 5, line 23. Furthermore, Nakajima discloses obtaining/ calculating encoder quantization levels based on decoder's quantization data as shown in Equation 12 (page 410), and Section 2.3 (page 409).

7.2.2. Regarding claim 27, the system of Moroney and Nakajima discloses **storing the output video stream**, see Moroney Fig. 4 ,the output of transcoder 427 is stored at 470; Col. 7, lines 3- 33.

Conclusions

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES R. MARANDI whose telephone number is (571)270-1843. The examiner can normally be reached on 8:00 AM- 5:00 PM M-F, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dominic D Saltarelli/
Primary Examiner, Art Unit 2421

/James R. Marandi/
Examiner, Art Unit 2421